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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,897	06/19/2001	Richard Folio	GCSD-1112 (51158)	1706

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EXAMINER
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NATNAEL, PAULOS M

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/884,897

Applicant(s)

FOLIO, RICHARD

Examiner

Paulos M. Natnael

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14-23 and 25-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12, 14, 20-23 and 25-37 is/are allowed.
- 6) ☒ Claim(s) 15 and 38 is/are rejected.
- 7) ☒ Claim(s) 16-19, 39 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **15 and 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zink et al., U.S. 6,246,439.

Considering claims **15 and 38**, Zink et al. (hereinafter, Zink) a method and apparatus for transparently embedding data into a video signal modulates a particular carrier frequency with a randomized pattern representing the data. (see Abstract) Zink teaches a decoder 70 (fig. 2) that is configured to extract content data such as the audio signal from the active video portion of the video signal. (see col. 8, lines 52-54)

Furthermore, Zink discloses,

“the subliminal data channel provided by the present invention may be used for stamping an identifying mark on a video sequence even if some of the video frames have been lost or portions of video frames have been cropped or distorted through lossy compression/decompression processing. The identifying mark may represent an audio signal or at least a signature of the audio into the active video to allow a remote video receiver to compare the audio signature with the received audio to automatically advance or delay the relative audio to video timing to maintain sound to video synchronization as

encoded at the source. The subliminal data channel may represent modem cryptographic digital signature authentication in the video. It may be used to identify a motion test sequence, or portion thereof, to be captured for video quality assessment,..” col. 8, lines 10-21. [emphasis added]

Zink does not specifically disclose whether the content data is encoded from a single top or bottom line of the active portion of the video signal. However, Zink does not preclude using one single line of the active video portion either. It would have been therefore obvious to the skilled in the art at the time the invention was made to modify the system of Zink by providing the method of inserting/extracting additional information on a single one of the upper and lower lines of the image signal, in order to use the rest of the line for other data and minimize transmission bandwidth or add more efficiency in the transmission of the data.

#### ***Allowable Subject Matter***

3. Claims **1-12,14, 20-23, and 25-37** are allowed.
4. Claims **16-19, 39,40** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: a system for encoding information into a video data stream of a video signal comprising: a modulation and video synchronization circuit for converting content data into at least one modulated frame of data having video synchronization; an interleaver

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operatively connected to said modulation and video synchronization circuit for interleaving the modulated frame of data into selected lines of the video data stream by substituting the modulated frame of data into single top and bottom video lines containing luminance information, as in claim 1; a modulation and video synchronization circuit for converting content data into at least one modulated frame of data having video synchronization information, an interleaver for receiving a video data stream and a modulated frame of content data having video synchronization information and interleaving the modulated frame of data within at least one selected video line of the video data stream that is substantially shadowed from viewing on a video display; by substituting the modulated frame of data into single top and bottom video lines containing luminance information; d) an interleave processing and control circuit operative with the modulation and video synchronization circuit and interleaver for timing and proper interleaving of modulated frames of content data with the video data stream, as in claim 12; wherein said line separation and restoration circuit further comprises a line deinterleaver for separating video lines having the encoded content data from the video data stream into a modulated frame of content data, as in claim 16; receiving a video signal as a video data stream to be enhanced with content data; converting content data into at least one frame of content data; adding video synchronization information and modulation data into the at least one frame of content data to form a modulated frame of content data; interleaving the modulated frame of content data within at least one selected video line of the video signal, by substituting the modulated frame of data into single top and bottom video lines containing luminance

information; converting the video data stream into a video into a video signal for broadcast; receiving the video signal with a decoder and decoding the video signal into a video data stream; extracting the content data from the video data stream, as in claim 31;

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Del Costillo (U.S. 6,742,188) discloses encoding data in the horizontal overscan portion of a video signal.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael  
Primary Examiner  
Art Unit 2614

July 8, 2005